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ABSTRACT

This survey is a follow-up to a comprehensive survey of eighth- and tenth-grade public school students conducted in 1988. The 1990 sample includes over 3,400 students from rural, metropolitan, and mixed school districts. Data were collected using a 120-item questionnaire and compared to available information from the 1988 survey. The study highlights 12 health knowledge and behavior areas: (1) mental health; (2) suicide knowledge; (3) violence; (4) sexual attitudes and behavior; (5) forced sex; (6) contraceptive utilization by females and males; (7) pregnancy; (8) sexually transmitted disease knowledge; (9) HIV/AIDS knowledge; (10) alcohol use; (11) substance use; and (12) nutrition. Results indicate only minor changes in adolescent health behavior since 1983. Many of the students continue to engage in health risk behaviors which may have both long and short term effects. For most categories of risky health behavior, the rates for white and black students are similar. Adolescents from single parent families often reported higher rates of negative health behaviors than did students residing with both parents, but negative health behaviors were common among all groups. Based upon findings, a number of recommendations are made. (LL)

SUMMARY REPORT II

The Alabama Adolescent Health Survey: Health Knowledge and Behaviors.

BY

Stephen Nagy, PhD

Anthony Adcock, HSD

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Superintendents of the participating school systems are also worthy of praise. The desire to know the health status of the students by these superintendents is commendable.

We would also like to express our appreciation to the school principals and teachers whose assistance was essential during the data collecting process. Their professional conduct and courtesy are noteworthy.

Finally, we would like to express our appreciation to all the individuals who assiste in instrument development and editiorial review of the document, especially Dr. M. Christine Nagy. We would like to also recognize Mr. Chester Jones. Mr. Jones has participated commendably in all phases of the study.

INTRODUCTION

In response to a need for a comprehensive health survey of adolescents in the United States, the National Adolescent School Health Survey (NASHS) was conducted in 1987. This comprehensive survey was jointly sponsored by the American School Health Association, the American Alliance for Health, Physical Education, Recreation, and Dance, and the Society for Public Health Education. The content areas for the survey were selected based on their significance to the health of youth, the fact that they did not duplicate any other national data set and the need for data relevant to the National Health Objectives for the Year 2000. The instrument used in the national survey was validated using a panel of content specialists and through a series of field tests of the items to be included.

The methodological framework of the NASHS was a stratified random sample of our nation's schools. The national survey did not distinguish between geographical districts. One of the recommendations of the national survey was that states replicate the study to determine whether the national statistics were representative of the individual states. Alabama was the first state to follow-up on the national recommendation. The Summary Report of the 1988 survey indicated that as a group the youth of Alabama were engaging in behaviors which placed them at risk for immediate and chronic health problems. There were minimal differences between Alabama adolescents and the national sample. The 1990 Alabama Adolescent Health Survey is the second step in the process of developing a longitudinal knowledge and behavior database of grade eight and grade ten Alabama students. The 1990 survey was timely because many of the grade eight students in the 1988 survey were the grade ten students in 1990.

QUESTIONNAIRE DEVELOPMENT

In 1988 data were collected using a modified version of the instrument used in the National Adolescent School Health Survey (NASHS). The three form instrument used in the NASHS was replaced with one questionnaire consisting of 112 items selected from the three forms of the NASHS instrument. A table of specifications was developed to guide the selection of items and to ensure balance in the questionnaire. Eight new questions on sexual behavior and safety practices were added to the instrument. The questionnaire was reviewed for face validity by a team of four health educators and slight modifications were incorporated. It was then pilot tested with 100 grade eight and grade ten students. Almost all students could complete the questionnaire in 50 minutes, the typical length of a class period in secondary school.

Before the 1990 survey, the instrument was modified slightly to obtain additional demographic information and several more health behavior questions were added. Several items were removed from the questionnaire so that the 1990 form contained 120 items, the same number as was included in 1988.

PARTICIPANTS

More than 3400 adolescents from public schools across the state of Alabama were included in the 1990 Alabama Adolescent Health Survey. The school systems which participated in the 1988 survey were again utilized in 1990. To maintain consistency in collecting longitudinal data the same schools in those systems participated in both the 1988 and the 1990 surveys.

The sampling plan was to select three school districts in the northern half of the state and three from the southern half. Each region was to have included one rural school district in a county with no town larger than 10,000, a moderate size district in a community of 10,000 to 50,000 and a district in a metropolitan area with a population greater than 50,000. Although originally intended to be a random sample, sexual conduct questions were unacceptable to some superintendents and they would not agree to participate in the study. Subsequently the sample was one of convenience and included two rural districts and two moderate size districts with one of each from the northern half and southern half of the state. Two metropolitan districts from the southern region agreed to participate.

METHODOLOGY

Data were collected from all grade eight and grade ten students in the rural districts and from at least 250 students from each grade level in the larger school districts. Researchers went into the schools and surveyed intact classes. Occasionally several intact classes were gathered together in a cafeteria, gymnasium or auditorium, and the instrument was administered to the classes in concert. Students were usually seated to allow for privacy and to respond unobserved by other students, or members of the research team. Students were provided with questionnaires, a computer answer sheet, and a pencil. A member of the research team then read the instructions and the students began. When completed, students deposited their answer sheets into a large enclosed box to assure their confidentiality.

DEMOGRAPHIC CHARACTERISTICS

The 1990 sample was made up of 46% males and 54% females. Ethnically the sample consisted of 63% white, 34% black, and 3% other. The corresponding percentages for the 1988 sample were 48% male, 52% female, and 62% white, 35% black, 3% other.

In the 1990 survey students were asked whom they lived with. Among the respondents 62% were living with both parents, 23% were living with the mother only, and 15% checked other options, which included mother and other relatives (6%), father only (3%), and father and other relatives (1%), grandparents (2%), and other than the above (3%). When the data on living arrangements were examined by ethnicity, major differences were found. Among whites, 72.5% were living with both parents, 15% with the mother only and 12.5% in other circumstances. Among blacks, 42% were living with both parents, 40% with the mother only, and 18% in other circumstances.

For purposes of classification those students age 14 and younger were grouped together and classified as "younger teens". Those age 15 and older were classified as "older teens". The sample included 52% "younger teens" and 48% "older teens". The 1988 sample consisted of 41% "younger teens" and 59% "older teens". Following are the characteristics of the two samples by sex and age:

1988

TOTAL SAMPLE BY AGE, N=3807

Younger N=1565 (41%)
Older N=2242 (59%)

FEMALE BY AGE, N=1971 (52%)

Younger N=845 (43%)
Older N=1126 (57%)

MALE BY AGE, N=1836 (48%)

Younger N=720 (39%)
Older N=1116 (61%)

1990

TOTAL SAMPLE BY AGE, N=3428

Younger N=1776 (52%)
Older N=1652 (48%)

FEMALE BY AGE, N=1834 (54%)

Younger N=995 (54%)
Older N=839 (46%)

MALE BY AGE, N=1594 (46%)

Younger N=781 (49%)
Older N=813 (51%)

RESULTS

The following tables and discussion represent selected items from the 120 items examined in the survey. The findings from the survey are grouped into the following categories:

1. Mental Health
2. Suicide Knowledge
3. Violence
4. Sexual Attitudes and Behavior
5. Forced Sex
6. Contraceptive Utilization of Females, Males
7. Pregnancy
8. STD's and HIV/AIDS Knowledge
9. Alcohol Use
10. Substance Use
11. Nutrition
12. Discussion and Recommendations

Throughout the tables, reference is made to gender (male, female) and to age (younger, older) and often comparative data for the 1988 sample are presented. The age differences between the two samples have important implications for how the 1988 and 1990 data can be compared. The incidence of health risk behavior increases with age. Because the 1990 sample is younger than the 1988 sample, it is difficult to make meaningful comparisons using the composite results. Therefore, when comparisons are made between 1988 and 1990 results they are most often made by gender (male, female) and by age (younger, older). Differences between the races and between those in various types of home environment are discussed when it is pertinent. Because of the major differences in home environment between whites and blacks, caution should be used in comparing racial differences. Many factors such as home environment may be contributing to racial differences.

Differences between students from urban areas and students from rural areas were minimal for most items in the 1988 survey. Based upon these findings the current data are not discussed by locale except in a few selected cases where differences are noteworthy. The reader who desires more information on the urban and rural comparison of Alabama adolescents may refer to the Summary Report of the 1988 study, ERIC publication number Ed 316 537 .

NOTE: UNLESS OTHERWISE INDICATED, ALL VALUES ARE PERCENTAGES IN THE FOLLOWING TABLES.

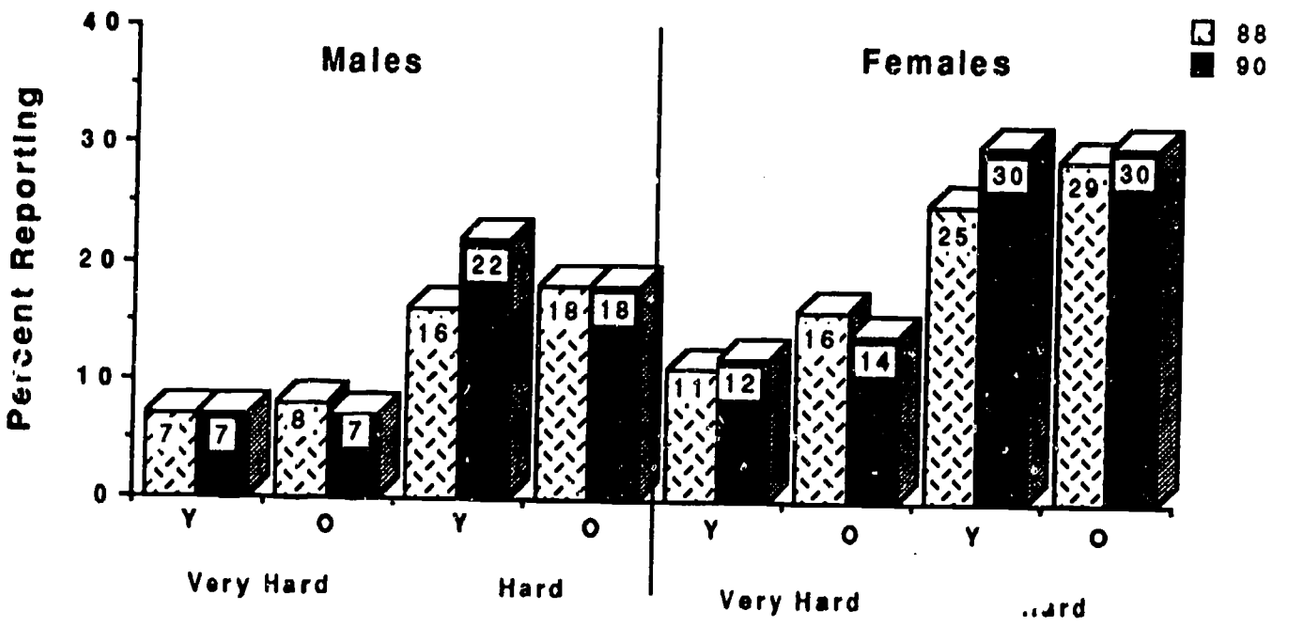
MENTAL HEALTH

STRESS, DEPRESSION, SUICIDE IDEATION, AND SUICIDE ATTEMPTS EXAMINED BY GENDER AND AGE

During the Past Month:

Y= Younger
O= Older

Perception of dealing with stress



Felt Sad And Hopeless, 1988/1990

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
OFTEN	9/11	10/15	17/25	22/31
SOMETIMES	26/27	25/29	39/36	42/38

Felt Nothing To Look Forward To, 1988/1990

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
OFTEN	6/9	9/12	12/14	15/17
SOMETIMES	16/14	15/17	20/21	25/24

In Past Year:

Seriously Thought About Suicide, 1990

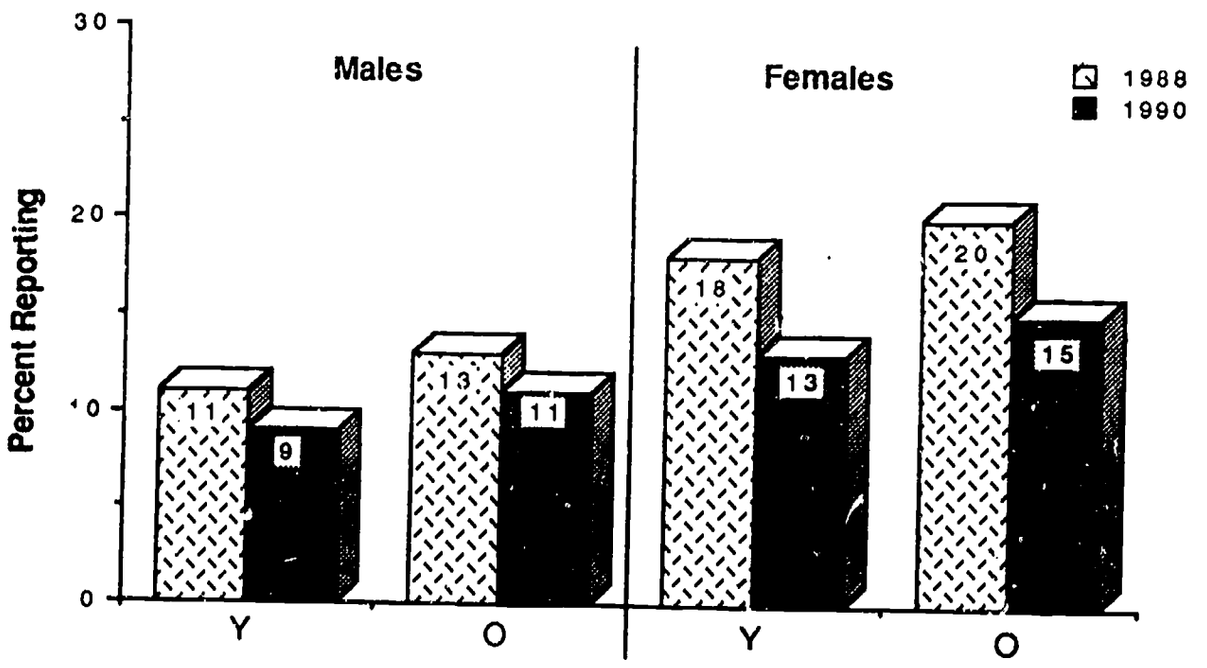
	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
ONCE OR TWICE	9	13	17	16
SOMETIMES	3	5	5	7
OFTEN	3	5	5	4

Made Plans About Suicide, 1990

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
YES	13	17	18	19

Y= Younger
O= Older

Tried to hurt self in a manner that might have resulted in death.



Attempt Resulting In An Injury For Which Medical Treatment Was Sought, 1990

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
YES	3	5	4	4

Suicide is now the second leading cause of death among adolescents. In Alabama rates had increased to about 30/100,000 by 1990. Suicide has been associated with both stress and depression. The data indicate that one in four males and one in three females are troubled by stress. Feelings of sadness and hopelessness and feeling that there is nothing to look forward to are indicators of adolescent depression. Using these items as criteria, as many as one in four males and one in three females indicate some form of depression. The incidence of feelings of stress and depression have risen since 1988.

The extent of the problem of adolescent depression may also be indicated by the number of students who responded that they had seriously thought about suicide during the previous year. Nearly two in ten males and three in ten females had seriously considered suicide at least once. Among males almost 10% had attempted suicide. The corresponding figure for females was 14%. Four percent of the sample had made attempts serious enough to require medical treatment. These figures indicate that large numbers of teens in Alabama are at risk.

STRESS, DEPRESSION, SUICIDE IDEATION, AND SUICIDE ATTEMPTS EXAMINED BY GENDER, ETHNICITY AND WHOM THE STUDENT RESIDES WITH

Difficulty Dealing With Stress

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	27	26	26	26	32
FEMALE	45	40	42	44	46

Often Felt Sad And Hopeless

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	12	13	11	14	19
FEMALE	29	25	24	30	37

Often Felt Nothing To Look Forward To

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	11	8	10	10	14
FEMALE	16	14	11	19	23

Often Seriously Thought About Suicide

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	4	3	3	5	6
FEMALE	5	2	3	5	9

Made Plans To Commit Suicide

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	14	15	13	18	19
FEMALE	19	19	17	20	24

Tried To Hurt Self In A Manner That Could Have Resulted In Death

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	9	9	8	12	14
FEMALE	15	10	12	14	22

Attempt Resulted In Injury

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALE	3	5	2	6	5
FEMALE	4	3	4	3	6

When the incidence of stress and indicators of depression are examined by ethnicity it is evident that both stress and depression are more common among whites than blacks, however differences are minimal. There is also very little ethnic difference among males in the incidence of suicide ideation and attempted suicide. White females however, are more than twice as likely to seriously think about suicide than black females and are 1.5 times more likely to attempt suicide than black females.

Whom the student resides with is a much stronger indicator of stress, depression, and attempted suicide than ethnicity. The lowest rates are among those students living with both parents. Higher rates are present among students living with the mother only and are highest among all for those students living in other home situations. For example, males in other home situations are twice as likely to seriously think about suicide than males living with both parents. Females living in other situations are three times more likely to seriously consider suicide than females living with both parents. The incidence of attempted suicide among students living in other situations is almost double the incidence of those living with both parents.

SUMMARY

These data indicate that females are at greater risk for stress and depression than males and are more likely to attempt suicide. Older students experience more stress and depression than younger students. It is apparent that family living arrangement has an impact on the incidence of stress, depression, and attempted suicide. Students living with both parents show a lower incidence of stress, depression, suicide ideation and attempted suicide than youth in other home environments. The data indicate that with the exception of suicide ideation and suicide attempts among females, there are only minimal difference between white and black students. A much lower percentage of black students live with both parents, however, and home environment seems to affect the mental health of white adolescents more than it does black adolescents.

Female students and students who are living in situations other than with both parents may be especially vulnerable to stress, depression, and suicide. Schools and communities should address the mental health problems of adolescents and should take measures to assure that services are available to teens in need of them. An educational program which promotes a positive self concept is essential in early childhood education and should continue throughout the student's educational career.

SUICIDE KNOWLEDGE

Students were asked to agree or disagree to whether behaviors indicated that a teen might be thinking about committing suicide. There were seven items:

-avoid family friends
-act in rebellious, reckless manner
-show less interest in enjoyable activities
-have no hope that their life will get better
-say things such as "You won't have to worry about me much longer"
-give away favored possessions
-act unusual (beyond what is expected)

These items were summed to develop a suicide knowledge inventory. Cronbach's alpha for reliability on this scale was .80 for both testing periods. Correct responses were given a point value of 1 allowing for a perfect score of seven. The average number of correct responses were:

	Males 1988/90	Females 1988/90
Younger	1.7/1.8	2.1/1.9
Older	2.4/2.3	2.6/2.7

SUMMARY

Suicide is a complex behavior and not all suicides display predictable signs before happening. However, many adolescents contemplating suicide have been known to display similar behaviors. The individuals most likely to observe these behaviors are peers of the at-risk individuals. (The peers of the at-risk individual are the most likely group to be in a position to seek assistance) It is therefore very important that adolescents learn to identify whether their peers are displaying suicidal symptoms. Recognition of what these suicidal behaviors are plays an important role in prevention and referral.

Results from the data on knowledge of suicidal symptoms indicate that nearly half of the symptoms were unrecognized. When the data are examined by age , gender and ethnicity, differences were minimal with values never differing by one full point. When poor knowledge levels regarding suicide exist, at-risk individuals are more likely to succeed in this behavior. In conjunction with poor suicidal knowledge is the likelihood that these students will not seek assistance from their peers, nor are they likely to know where to go for assistance when it is needed.

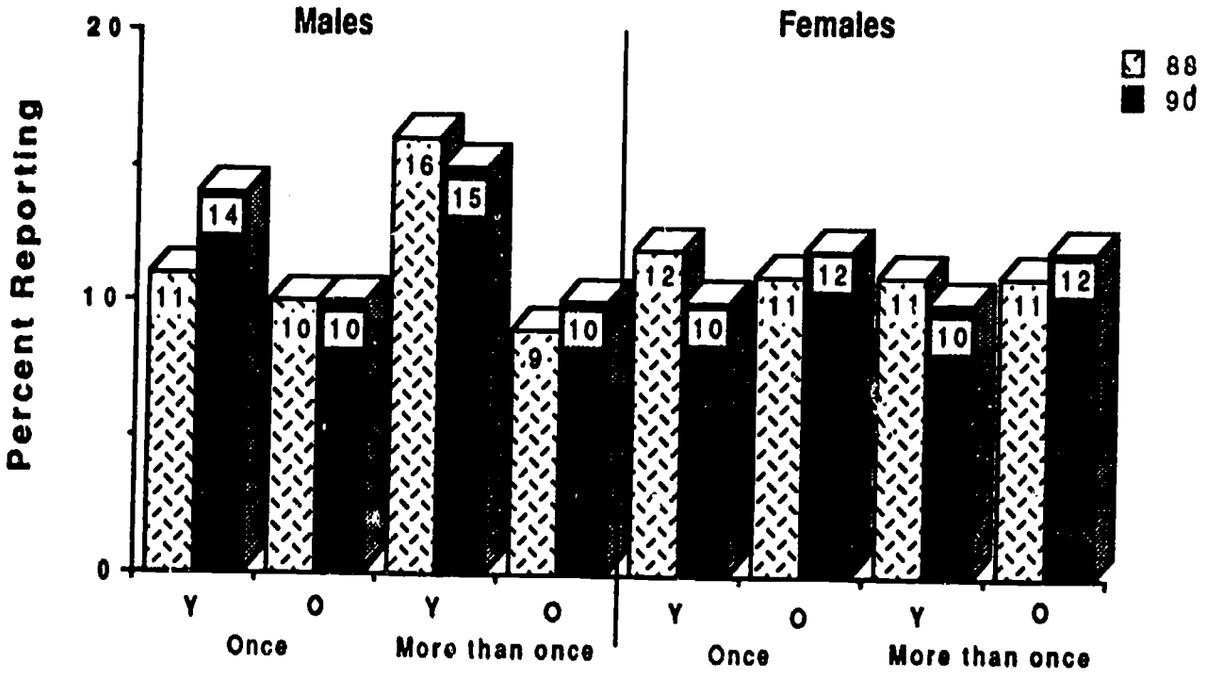
It is apparent that minimal changes have occured since 1988. If educational initiatives on suicide have been undertaken in the school districts, these efforts have been unsuccessful. There is a strong need for curricula to address suicide knowledge and suicide prevention resources.

VIOLENCE

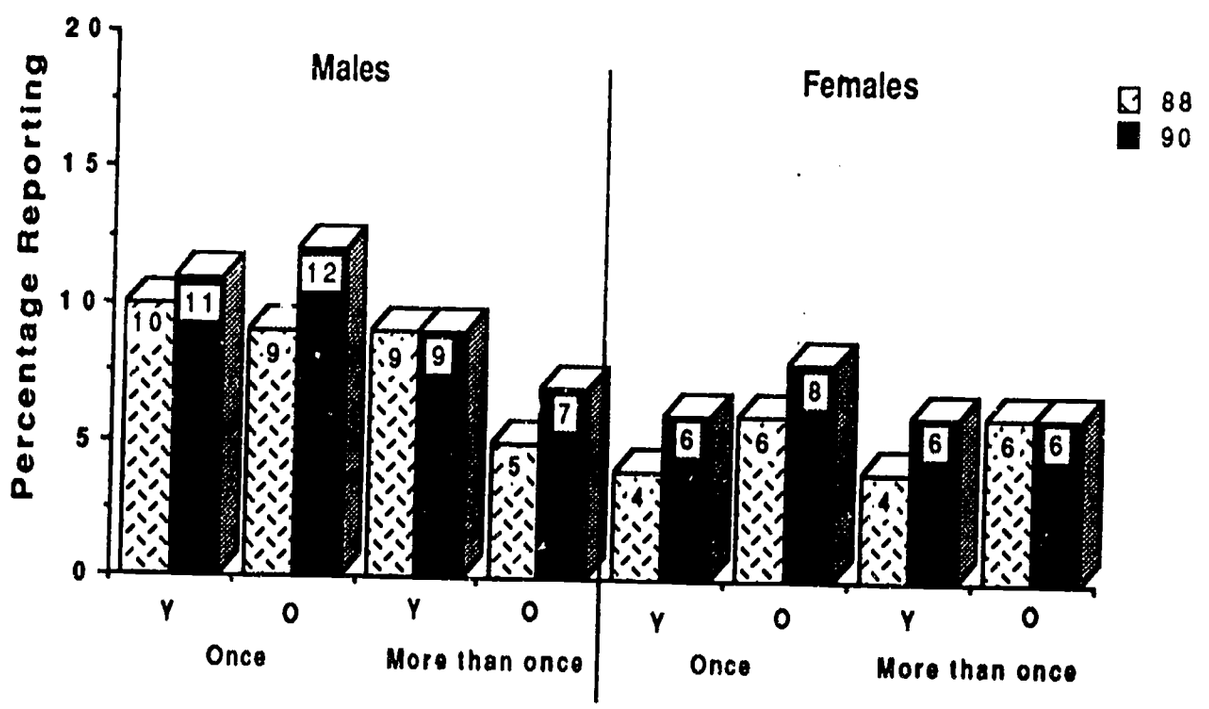
Values are percentages

During the past year has someone attempted to:

Y= Younger
O= Older Past year had something taken by force or threat



Y= Younger
O= Older Was physically attacked in the past year



Carried a weapon last month (1990 only)

		Once	2-3	4±
Males				
1990	Younger	10	9	13
	Older	9	11	22
Females				
1990	Younger	4	4	4
	Older	4	4	5

SUMMARY

It is important to note that the data in this study were obtained from in-school youth. Questions about violence and related items did not specify the site of the violent acts. Data released in the 1988 Summary Report compared Alabama to National data. Data from the National Adolescent Student Health Survey did differentiate between violent acts occurring both on and off school grounds. However, most of the results comparing school and non-school settings were very similar. One would expect this since many of the same students interact in both environments. Subsequently, we did not differentiate between school and non-school settings.

The results for older and younger males and females remained strikingly similar for both 1988 and 1990 samples. In both surveys, about one in five males and females had something taken from them by force or threat during the previous year. Data on younger and older males and females who had been attacked were again very similar for the 1988 and 1990 surveys. Slightly more than 10 percent of the students had been assaulted during the previous year.

In e 1990 survey, students were also asked how often they had carried a weapon such as a gun, knife or club for self-protection or because they thought they might need it in a fight. One in three of the older males and one in five of the younger males indicated that they had carried a weapon at least once during the past month. Rates for females were comparable for both age groups with about 13 percent carrying a weapon at least once.

A major area of con' 'rn regarding violence is ethnicity. Currently, one of the main causes of death among young black males nationwide is homicide. Examination of the data on violence among this cohort of Alabama youth shows minimal differences when comparisons are made between black and white youth.

Among females 22% of both black and white adolescents indicated that something had been taken from them by force or threat. Rates were 22% and 24% respectively for black and white males. When asked if they had been threatened, 35% and 40% of black

and white females and 36% and 42% of black and white males had been threatened.

Rates were again similar when students were asked if they were attacked. Fourteen percent of the black females and 12% of the white females and 18% of black males and 20% of white males indicated that they had been attacked during the past year. Regarding possession of a weapon, 18% and 8% respectively of black and white females and 40% and 35% respectively of black and white males had carried a weapon.

Other variables examined in conjunction with violence included where the student lived and with whom. With regard to the setting the student lived in, (county or metropolitan) there were minimal differences. Rates rarely varied by five percent forracial and gender comparisons. When comparisons were made based upon whom the student lived with, (both parents, mother only and others), there was a slight pattern. Rates of violence were almost always lowest when the student lived with both parents, however these rates rarely varied by more than five percent.

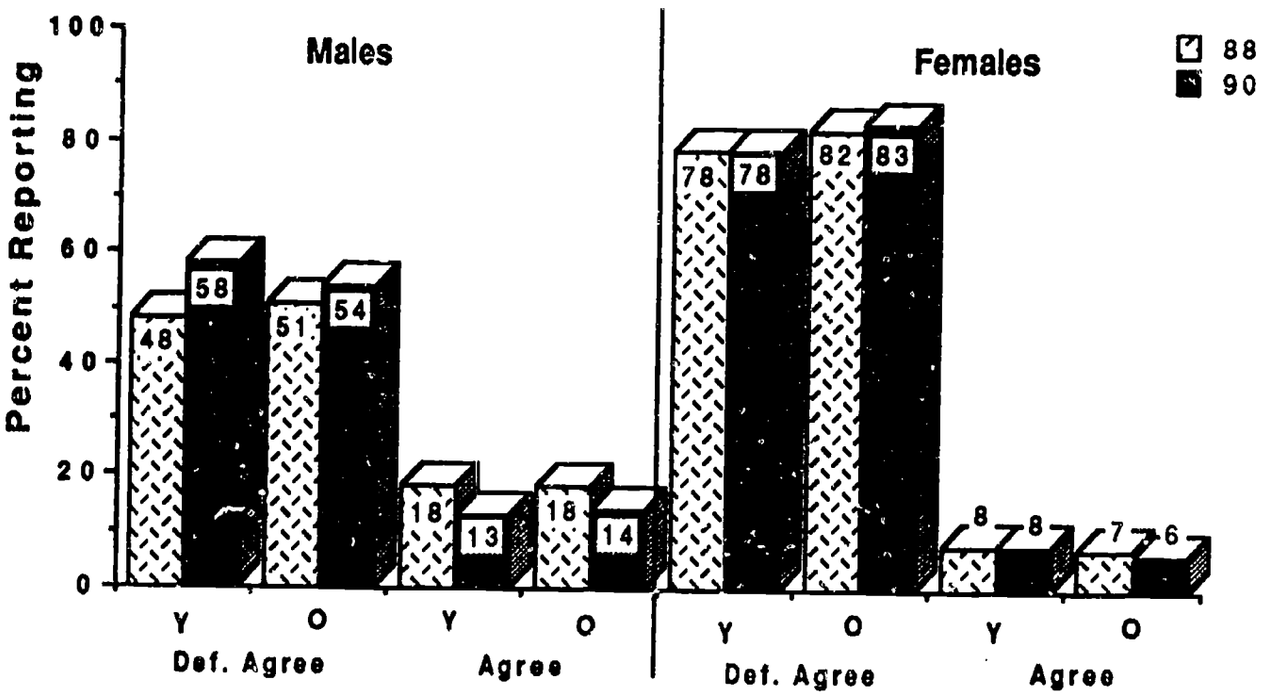
In summary, rates of violence seemed to be higher for males than females. The age of the student had a slight influence on violence among males whereby younger males generally experienced more types of violence but were less likely to carry weapons. Other factors such as ethnicity, residence and household composition played minor roles in determining differences among students experiencing violence among Alabama students.

SEXUAL ATTITUDES AND BEHAVIORS
SEXUAL ATTITUDE EXAMINED BY GENDER AND AGE

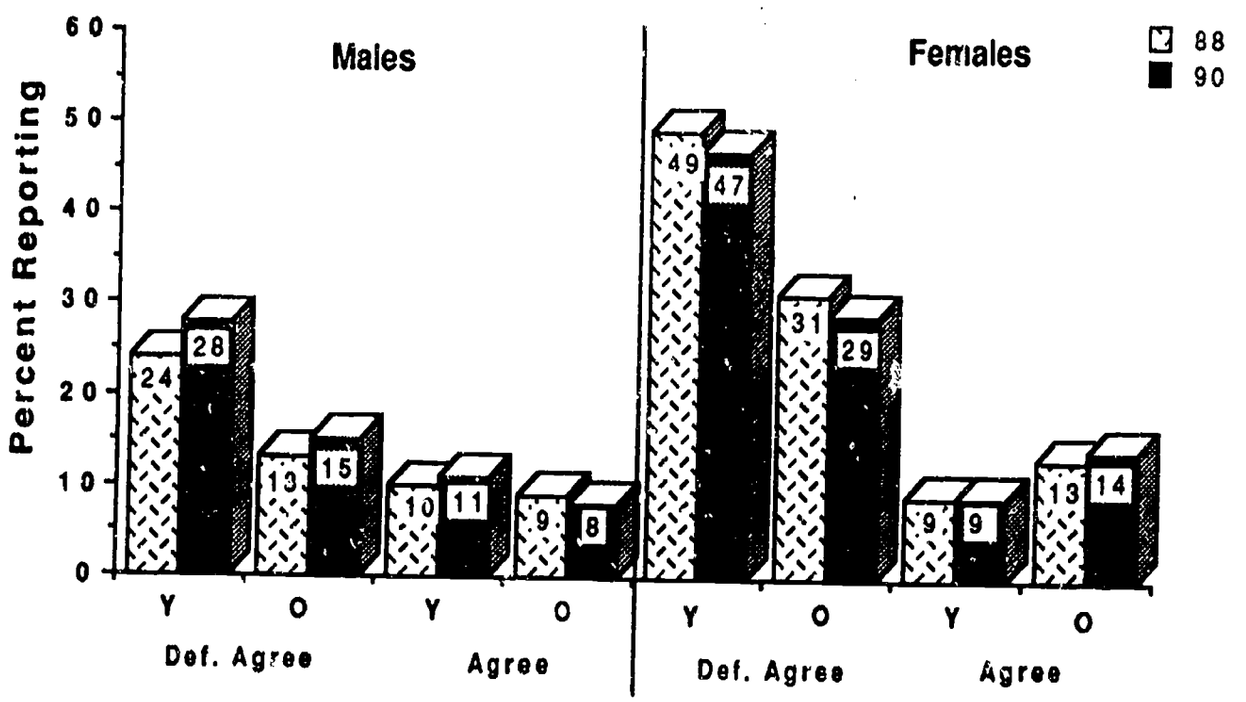
Values Are Percentages, 1988/1990

Y= Younger
O= Older

Believe it is OK to say "No" to sex



People my age should not have sex.



Believe It Is Okay To Have Sex With Someone You Have Known For A Long Time

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
53/52	73/72	34/35	52/56

Believe It Is Okay To Have Sex With Several Different People

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
20/21	24/29	8/11	8/10

For each of the sexual attitude questions students were given five choices: definitely agree, probably agree, undecided, probably disagree, and definitely disagree. The definitely agree and probably agree responses were combined to obtain the percentages which agreed with the attitude statements. These data indicate that there has been little change in sexual attitudes amongAlabama's teens since 1988. Almost 70% of males and 90% of females believe it is okay to say no to sex, but only 30% of males and 50% of females believe that people their age should not have sex. One in four males and one in ten females believes it is okay to have sex with several different people. Males tend to be much more permissive in sexual attitudes than females. For example 2.5 times as many males (25%) agreed with the statement that it is okay to have sex with several different people (females 10%). Older students also tend to express more liberal sexual attitudes than the younger students, however there were exceptions. Age does not seem to be a factor in whether students agree that it is okay to say no to sex, and among females slightly fewer of the older teens than younger teens agreed with the statement that it is okay to have sex with several different people.

SEXUAL ATTITUDE EXAMINED BY GENDER, ETHNICITY AND WHOM THE STUDENT RESIDES WITH

Believe It Is Okay To Say No To Sex

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALES	74	62	73	69	60
FEMALES	92	81	90	83	85

Believe People My Age Should Not Have Sex

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALES	34	24	33	25	25
FEMALES	53	46	53	45	41

Believe It Is Okay To Have Sex With Someone You Have Known For A Long Time

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALES	58	73	60	69	65
FEMALES	41	52	39	52	54

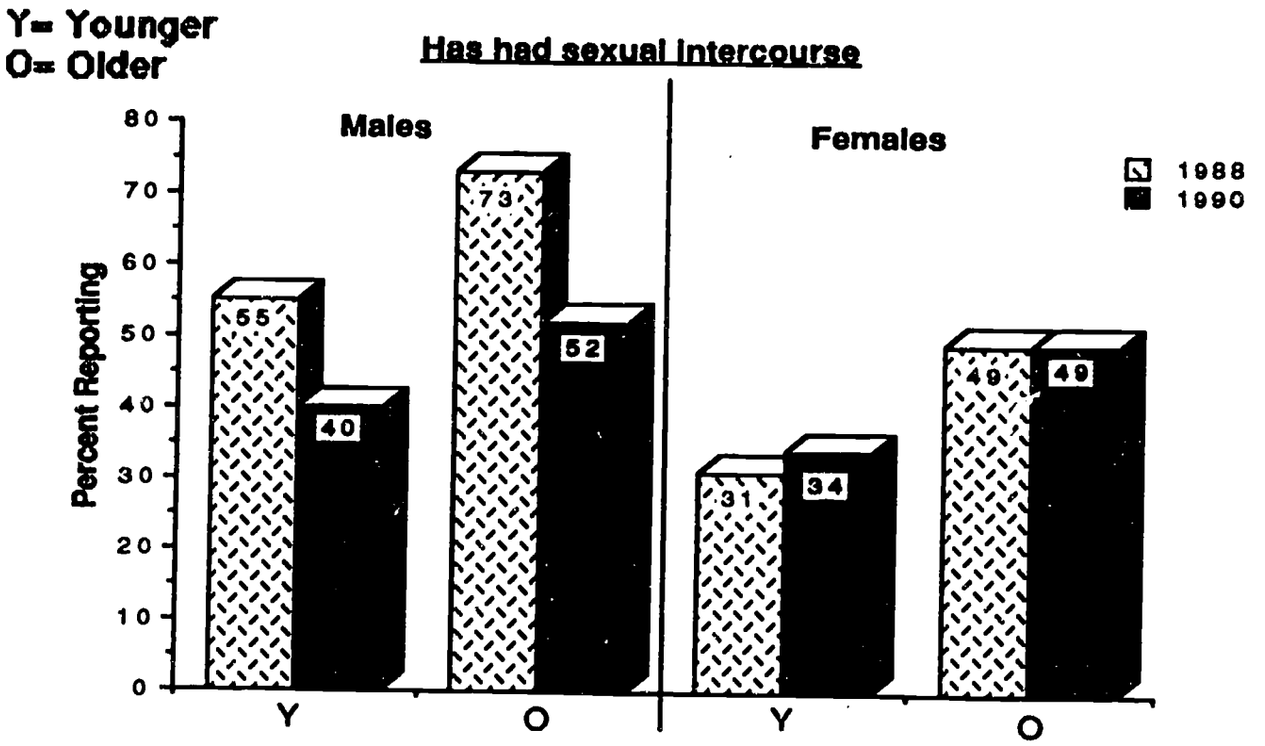
Believe It Is Okay To Have Sex With Several Different People

	WHITE	BLACK	BOTH PARENTS	MOTHER ONLY	OTHER
MALES	21	32	22	32	25
FEMALES	9	13	9	12	14

For each of the sexual attitude items white teens expressed more conservative beliefs than black teens. A greater percentage of white students believe it is okay to say no to sex and that people their age should not engage in this activity. Furthermore a smaller percentage of white teens compared to black teens believe it is okay to have sex with someone you have known for a long time and it is okay to have sex with several different people. The difference between white and black students was 10% or more for males and ranged from 4% to 11% for females.

When the data are examined by student's home environment it is evident that those living with both parents expressed more conservative beliefs than other students. This factor may help to explain the more liberal attitudes of black students since more black students do not reside with both parents.

Sexually Acitve Students (1988/1990)



Data concerning sexual intercourse show that rates among females have changed very little since 1988. Rates of sexual intercourse among younger females increased slightly from 31% in 1988 to 34% in 1990. Among older females, 49% were sexually active in both 1988 and 1990. Rates of sexual intercourse among males show a substantial decline since 1988. Among younger males, 40% were sexually active in 1990 as compared to 55% in 1988. Among older males 52% indicated they were sexually active in 1990 while 73% reported the same in 1990.

Among white teens 37% of females and 42% of males report having engaged in sexual intercourse. Among black teens corresponding figures were 54% for females and 64% for males. Rates of intercourse also varied substantially according to the living environment. Rates of intercourse are approximately 50% greater for students not living with both parents.

Among the adolescents who have had sexual intercourse 25% of males and 15% of females report having intercourse more than once a week. In contrast 34% of the males and 44% of females who reported sexual intercourse indicated that they experienced it only a few times a year or less. When frequency of sexual intercourse is examined by ethnicity and by home environment only minimal differences are noted.

SUMMARY

The findings of the Alabama Adolescent Health Survey indicate that the attitudes and behaviors of Alabama's youth are very similar to the findings of national studies on adolescent health behaviors. Many adolescents are engaging in sexual behaviors which place them at risk for pregnancy, STD infection and HIV infection. The potential for social, emotional, and physical trauma has both short term and long term implications for adolescent lives. The likelihood of a student engaging in sexual intercourse is slighty increased if the student is black or if the student is living in an environment where both parents are not present.

The decline in rates of sexual intercourse among males was unexpected. It is also difficult to explain because male sexual attitudes did not show a corresponding shift to more conservative values and there was no comparable change in female sexual behavior. Since the study examined only adolescents in school this decline may reflect a higher drop-out rate among sexually active males. Modifying sexual attitudes and behaviors among adolescents is difficult, but these data support the contention that among males, school and community programs directed at reducing sexual behavior may be having a positive impact.

School and communities need to endorse educational campaigns which promote the delay of sexual intercourse and provide support for abstinence as the normative behavior for adolescents. Educators, parents, and other adults should realize that the idea of delaying sexual intercourse conflicts with many of the sexual messages young people encounter daily on television, in movies, at school, and from friends. Educational programs should help students learn how to say no to risky sexual behavior. The AAHS findings indicate that 37% of the eighth graders and 50% of the grade ten students had had sexual intercourse, and that approximately 20% of this group experienced intercourse several times each week. Educational programs, while emphasizing to students the risks of sexual activity, should include methods on how to minimize risk if students still choose to be sexually active.

FORCED SEX
1990

(ONLY THOSE STUDENTS WHO INDICATED THEY HAD HAD SEXUAL INTERCOURSE RESPONDED TO THESE QUESTIONS)

Has A Date Or Boyfriend/Girlfriend Ever Forced You To Have Intercourse (sex)?

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
Yes	14	22	19	29

Has A Parent Or Relative Ever Forced You To Have Intercourse (sex)?

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
Yes	9	11	12	12

Has A Stranger Ever Forced You To Have Intercourse (sex)?

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
Yes	10	10	13	13

The most troubling data in the 1990 Alabama Adolescent Health Survey were items addressing forced sex. Forced sex items were asked only of those students who indicated that they had had sexual intercourse. The percentage of students responding affirmatively to the forced sex questions refers only to those who have had sexual intercourse, but even when this is considered, the rates of forced sex are a source of serious concern.

The most common type of forced sex is that which is initiated by a boyfriend or girlfriend. Approximately one in four sexually active females and one in five sexually active males indicate that a date has forced them to have intercourse. Rates of forced sex by relatives and by strangers are about half the rates for date rape. Incest is almost as common as is forced sex by a stranger. The data indicate that at least 1 in 15 students in Alabama are victims of forced sex.

When data on forced sex are examined by ethnicity the rates are found to be almost identical for white and black students. Only minimal differences are found among students from different home environments. Forced sex among sexually active students is common in all types of home environments and among both white and black students.

The fact that males reported rates of forced sex nearly as high as those of among females was unexpected. Students were not asked the specific nature of the forced sex experience, and it is not possible to know the kinds of experiences which the males classified as forced sex. Since penis erection is necessary for heterosexual intercourse to occur, the males may have considered forced sex to be situations where an aggressive female aroused them to the point that they engaged in intercourse even though they did not initiate it. It is also likely that some of the forced sex experiences were homosexual encounters where they were forced to be the passive partner.

The physical trauma associated with forced sex, while serious, may be overshadowed by the emotional trauma that can result. For example, when rates of attempted suicide for victims of incest are compared to other students,these studentst are almost twice as likely to have thought about suicide, and are 2.5 times as likely to have attempted suicide. If an attempted suicide occurred, it was 3 times more likely to have required medical treatment. Among the students who are victims of incest, 49% had thought about suicide, 39% had attempted suicide and 38% of the attempts required medical treatment.

SUMMARY

The problem of forced sex among adolescents, particularly date rape and incest, has been largely ignored by both our communities and our schools. The 1990 AAHS indicates that forced sex occurs much more frequently than is generally acknowledged. Adequate mental health services should be provided in every community and confidential access should be provided for Alabama's adolescents. Counseling services should be available in every school and counselors and teachers should be made aware that incest and other forms of forced sex may be a part of the profile of the student suffering from emotional and behavioral problems.

Educational interventions should emphasize the importance of avoiding situations where date rape and stranger rape may occur, and the danger of mixing alcohol and drug use with sexual activity. How to access counseling services should also be emphasized.

CONTRACEPTIVE UTILIZATION
1990 Data Only

FEMALES
WHITE/BLACK
Percent using:

	CONDOM	DIAPHRAM	WITHDRAWAL	JELLY/FOAM	PILL
NEVER	29/33	91/91	61/80	90/92	72/71
SOMETIMES	31/28	6/7	16/10	6/6	10/12
OFTEN	10/6	0/0	9/5	2/0	2/3
ALWAYS	30/33	3/2	14/5	2/2	16/14

It is important to note that these are self-reported data. The literature warns that self-report data are frequently over-reported by individuals responding to surveys. These data examine responses from those women who indicated that they were sexually active. White females comprise 54% of this group (N=397) while black females comprise 46% of this sample (N=337).

When comparisons are made between younger and older females and white and black females, there are very few meaningful differences. Approximately one-third of the sexually active women report that they always used a condom. The second most common method of birth control was the pill with approximately 15%, indicating that they always used this form. No questions were asked as to whether contraceptive methods were combined. However, further analysis indicated that 49% of the women always using pills also indicated that they used condoms often or always.

When data were examined by household composition (mother and father, mother alone, others), there were no meaningful differences (less than five percent) on any of the comparisons.

The 1990 survey also asked sexually active females about their attitude toward contraception. Students were asked to indicate which selection best described their attitude about birth control:

- didn't need it
- should use it
- always use it.

Thirty-two percent of the black women and 33% of the white women reported that they always used birth control. This value corresponds with data presented in the previous table. Ethnic differences however, were apparent when the other two attitude selections were examined. Responses indicating that they don't need birth control were 43% for black and 31% for white women. Twenty-five percent of the black women indicated that they should

use birth control compared to 36% of the white females.

It is interesting to note the differences among women's responses on the attitude toward birth control items. Contraceptive behaviors however, do not reflect these ethnic differences in attitude. It seems that those women indicating that they should use birth control do not act in accordance with their beliefs. One explanation for this difference between attitude and behavior may be that some women are having problems obtaining birth control services.

Contraceptive utilization was also examined based on the age of sexual initiation and how frequently sex occurred. Frequency was examined using three categories; rarely (about once or less per month), sometimes (a few times per month) and often (once or more per week). Age of the student's first sexual intercourse also used three categories. These age categories consisted of 11 or younger, 12 and 13, and 14 plus years at the age of initiation.

Twenty -two percent of those initiating intercourse at age 11 or earlier were also in the high frequncy group (those who had sex often). Fifteen percent of those intiating sex during the ages of 12 and 13 were in the often group and 14% of those who initiated sex at age 14 or older were in this group. It is apparent that more of those students who initiate sexual behavior in their younger years also have more frequent intercourse. These frequency and initiation categories were also used to examine contraceptive use.

	Use Condoms Often/Always	Use B.C. Pill Often/Always
AGE AT INITIAL SEXUAL INTERCOURSE		
11 or younger	32	14
12 - 13	40	17
14+	43	21
FREQUENCY OF INTERCOURSE		
Rarely	38	12
Sometimes	41	19
Often	39	35

When age of sexual initiation and frequency of intercourse were examined, some patterns emerge. Students who were older when they initiated sexual intercourse were more likely to use pills and condoms than those initiating at an earlier age. Similarly, pills were used more frequently by those students who had more frequent intercourse. Condom use however, showed no pattern when frequency of intercourse was examined. This could be influenced by the perception among some of the women that condoms are a male form of birth control.

SUMMARY

When contraceptive utilization is examined, ethnicity and the student's family structure do not seem to be major influences on contraceptive utilization. It is apparent that the greater majority of sexually active women do not regularly use birth control. Condoms, a male controlled form of birth control and the birth control pill are the dominant forms of contraception. It also appears that women who initiate sexual behavior at an earlier age use birth control less frequently than those who initiate sexual behavior at a later age. Given the low rates of birth control utilization and the frequency of sexual intercourse, one would expect a high pregnancy rate among these adolescents. This may help to explain why teenage pregnancy rates among the very young are currently rising.

Male Contraceptive Utilization 1990

An examination of the responses among males who were sexually active and responded to questions on condom use showed that 60% (N=419) were white while 40% (N=285) were black. The male's age at initial intercourse showed that black males were more likely to have had sexual intercourse at an earlier age. Black males comprised 50% of students who initiated sexual intercourse by age 11 or earlier. Subsequently, the age groups of 12 - 13 and 14 and older have proportionally more white males within these groups. Because of these disproportions, data on condom use have been reported considering ethnicity as a factor.

An additional variable that should not be overlooked is family structure. An examination of condom utilization among sexually active males showed that family structure did not affect the rates of condom utilization. These rates varied by less than one percent.

FREQUENCY OF CONDOM USE

	NEVER	SOMETIMES	OFTEN	ALWAYS
ALL SEXUALLY ACTIVE MALES	23	26	14	37
FREQUENCY OF INTERCOURSE White/Black				
Rarely	24/23	24/28	13/11	39/38
Sometimes	14/6	31/37	11/12	44/45
Often	29/25	25/31	17/22	29/22
AGE AT INITIAL INTERCOURSE				
11 or younger	39/20	24/36	13/15	24/29
12 - 13	15/13	33/29	11/13	41/45
14 or older	15/25	21/33	18/2	46/40

When condom use and the frequency of intercourse were examined, males who had intercourse often reported that they were less likely to always use condoms than males who had intercourse rarely or sometimes. This profile was similar for both black and white males. A similar pattern emerged when condom use and the age at initial intercourse were examined. In the second table, the youngest age group indicated that they were less likely to always use condoms than males who initiated intercourse at older ages. This profile was similar for both black and white males.

Based upon the frequency and age of initiation tables, males who initiated intercourse at an early age and had intercourse often were the groups least likely to always use condoms. These groups however, are at greatest risk for causing a pregnancy or aquiring a sexually transmitted disease. It is also important to note that although the black males were represented more freqently in the young age group for initial intercourse, the rates of condom utilization were not meaningfully different from their white counterparts.

These data help to explain the rising pregnancy rates among the very young in our state. It is apparent that condom use is infrequent and not well received by sexually active males regardless of ethnicity.

The number of very young students who are sexually active raises a number of issues, foremost of which is the availability of condoms. Very young students are least likely to appreciate the need for condoms and also least likely to access them. If abstinence programs are not delaying the age of sexual initiation among the very young, interventions will need to address condom education and availability.

PREGNANCY

Students who were sexually active were asked one question about their pregnancy status. Females were asked if they had been pregnant and males were asked if they had caused a pregnancy. Responses were yes, no or not sure.

	FEMALES (N=712)	MALES (N=668)
YES	(N=80)11.2%	(N=76)11.4%
NOT SURE	(N=29) 4.1%	(N=79)11.8%

Slightly more than 10% of the sexually active males and females reported that they had either been pregnant or caused a pregnancy. About 4% of the females were uncertain if they were previously pregnant and almost 12% of the males were uncertain if they had caused a pregnancy.

FEMALES

Ethnic comparisons on females who had been pregnant showed minimal differences among the races. Differences varied by less than 2%. Additional comparisons based upon familial setting (lived with both parents, mother only, others) showed minimal differences as well. When pregnancies were examined by the age of initial intercourse, no patterns were apparent. Twenty-six percent of the pregnancies occurred among femalles who initiated intercourse at age 11 or earlier. Students initiating intercourse at 12 or 13 years of age accounted for 38% of the pregnancies and those initiating intercourse over the age of 13, accounted for 38% of the pregnancies. Over two-thirds of the pregnancies were among females who had sex sometimes and rarely. Responses were much the same for females who were not sure that they had been pregnant.

MALES

White males (6.7%) indicated that they had caused a pregnancy more frequently than black males (4.6%). Similar patterns were shown for males who were uncertain if they had caused a pregnancy (white, 7.2%:black, 4.6%). When examined by the age of initial intercourse, a strong general trend was shown. Over 63% of the pregnancies were caused by males who initiated intercourse by age 11 or younger. Among all male groups, the males most sexually active, claimed to have caused the most pregnancies. Similar patterns were shown for males who were not sure that they had caused a pregnancy. Examination by familial setting indicated that there were minimal differences among male comparison groups. Differences did not vary by 2%.

SUMMARY

Among the sample of adolescents examined, fewer than 50% were sexually active, and slightly more than 10% of the sexually active students indicated that they had been pregnant or had caused a pregnancy. Additional confounding factors, in obtaining exact data, include the possibility that students who had been pregnant may have dropped out of school. Another confounding factor is reported in the adolescent literature. Students who are pregnant or have fathered children tend to have much higher truancy rates. Based upon these criteria, these data can be considered a conservative estimate for this population.

It is difficult to draw firm conclusions when the sample size is small. However, it appears that having been pregnant or causing a pregnancy is similar for both races and among home environments for this sample. It is important to recognize that this group is predominantly under 17 years of age.

Females do not exhibit any patterns regarding who becomes pregnant, but, males do exhibit patterns. It appears that males who initiate sexual behavior earlier and are more sexually active are fathering more children. Interventions focusing on the male role in teenage pregnancy need to consider this group at high risk group for fathering children.

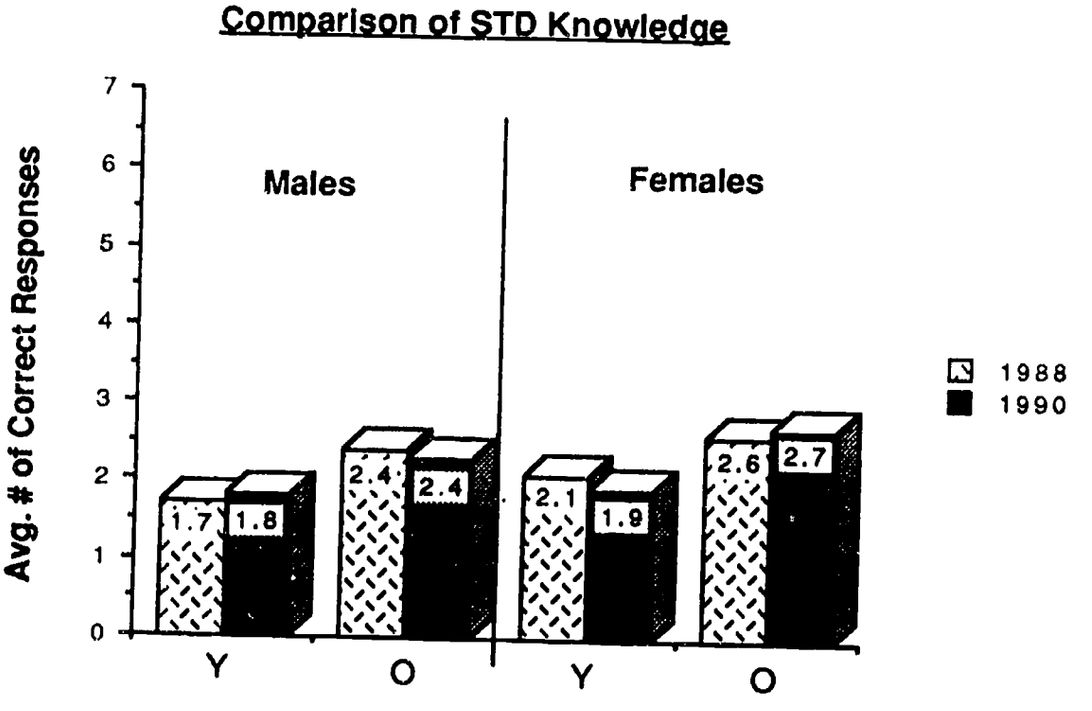
SEXUALLY TRANSMITTED DISEASE KNOWLEDGE

Students were asked if the following are common early signs of sexually transmitted disease (STD):

-low abdomen pain (in females)
-nausea
-discharge of pus from sex organs
-coughing
-headache
-sore on the sex organ
-pain when going to the bathroom

The items above were combined to form an STD knowledge inventory. Cronbach's reliability estimate for this scale was .80 on both surveys. Correct responses were given a point value of 1 allowing for a perfect score of seven. The average number of correct responses were:

Y= Younger
O= Older



SUMMARY

Knowledge scores for sexually transmitted disease (STD) symptoms are very low and have shown very little change over the past two years. Poor knowledge of symptoms is likely to reduce the number of sexually active individuals seeking treatment for STD's. Although high knowledge of STD symptoms does not necessarily mean individuals will seek treatment, knowledge of symptoms is a precursor to seeking treatment.

Further examination of the STD scores show minimal differences between males and females. Scores were broken down into high, moderate and low knowledge categories. High scores (11%) included students scoring six or seven correct responses out of the possible responses. Moderate scores (21%) were three, four or five correct responses, while low scores (68%) scored fewer than three correct.

Additional examination by ethnicity showed very similar scores for black and white adolescents. Ethnicity and gender do not seem to be factors that influence STD knowledge scores. It is apparent that very few students are receiving formal instrucion in the recognition of STD's. Given the knowledge levels, the relatively high rates of sexual intercourse, and the low rates of condom use among these adolescents, rates of STD's are likely to escalate.

AIDS KNOWLEDGE

Students were asked if certain behaviors made it more likely for a person to become infected with the AIDS virus.

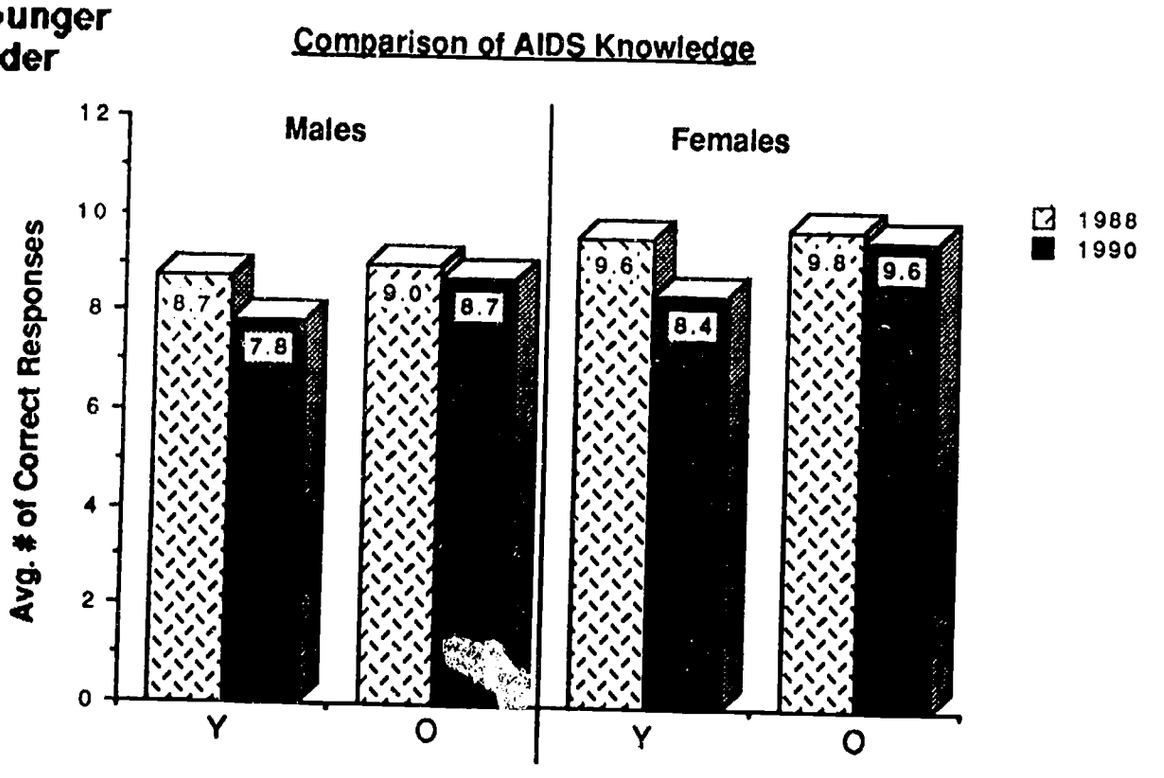
-sex with a person who has the AIDS virus
-having more than one sex partner
-having sex with several partners
-sharing drug needles
-shaking hands with a person with AIDS
-hugging person with AIDS
-donating blood
-being in a classroom with someone who has AIDS

Students were also asked whether the following were true.

-people with AIDS die from the disease's complications
-pregnant mothers can infect their babies
-people must be sick to spread AIDS
-a vaccine is available for AIDS

The items were all included in an AIDS knowledge inventory. Cronbach's reliability estimate was .80 for both scales. Correct responses were given a point value of 1 allowing for a perfect score of 12. The average number of correct responses were:

Y= Younger
O= Older



A review of the scores indicates that there has been an overall decline in AIDS knowledge scores in all the groups examined. These lower scores reflect the national trend towards declining emphasis on AIDS. Gender comparisons show that females generally score better than males. Ethnic comparisons indicate that blacks score on average, about one point lower for same gender comparisons. This raises the question as to whether AIDS is taught in the same manner in predominantely black schools.

Scores were grouped into high (11 or 12 correct responses) moderate (8, 9, 10 correct) and low (below 8) groupings. One-third (33%) of the students were in the high grouping. These students were evenly divided among males and females. Forty-six percent of the students fell into the moderate score grouping. Females comprised two-thirds of this group. The low score grouping (21%) was comprised largely of males. When the high score groupings are examined by gender and ethnicity, differences are evident. White females comprise 78% of the high score grouping for females and white males comprise 80% of the high scores for males. When the high score groupings are examined comparing students who have had intercourse with their abstaining counterparts there are no differences in knowledge scores.

Since AIDS has no cure, education continues to be the pillar stone for prevention. When AIDS knowledge scores are examined, about two-thirds of the students fall into an unacceptable score range. These low knowledge levels and risky behaviors of Alabama adolescents make them very susceptible to HIV infection. Among the adolescents examined in this study, half have had sexual intercourse and those who are the most sexually active also use condoms the least. As the AIDS virus becomes more common among this adolescent group, high rates of infection are likely to occur.

ALCOHOL USE

Younger/Older (1990 data)

	MALES	FEMALES
ALCOHOL CONSUMPTION DURING THE LAST 30 DAYS		
WINE		
None	77/66	82/76
1-2 servings	13/16	9/12
3-5 servings	5/9	4/6
more than 5	5/9	5/6
WINE COOLERS		
None	75/69	78/72
1-2 servings	12/13	11/13
3-5 servings	6/7	5/6
more than 5	7/11	6/9
BEER		
None	71/51	79/67
1-2 servings	13/13	9/12
3-5 servings	7/11	5/7
more than 5	9/25	7/14
LIQUOR		
None	81/63	85/75
1-2 servings	9/13	7/11
3-5 servings	4/9	3/6
more than 5	6/15	5/8

STUDENTS CONSUMING FIVE OR MORE DRINKS
IN ONE SITTING DURING THE LAST 2 WEEKS

(Younger/Older)

	MALES		FEMALES	
	1988	1990	1988	1990
Once	11/14	9/13	10/11	9/10
More than Once	15/26	14/27	10/16	11/17

Alcohol is undoubtably the drug of choice among Alabama youth. Rates of use among the younger adolescents (14 and younger) are high with one-quarter of the males and one-fifth of the females having consumed alcohol during the past month. Rates are about 10% to 15% higher among the older teens of both sexes.

When the number of five drink occassions were examined, it is apparent that the majority of adolescent drinkers drink five drinks when they consume alcohol. Given their body size and the amount of alcohol consumed, it is likely that the purpose of drinking is to become intoxicated.

Adolescents were also asked about their attitude toward alcohol. Among males, 62% of the younger group and 42% of the older group indicated that they didn't think it was appropriate to drink and therefore did not drink. Among females, rates on this item were 64% and 49% respectively for younger and older adolescents. Another attitude selection was "I drink but I am concerned about my drinking." Eighteen percent of younger and 21% of older males selected this response. Nineteen per cent and 24% of the females responded similarly.

A third response on attitude toward alcohol was "I drink to be sociable." Fourteen percent of younger and 26% of older males and 13% of younger and 24% of older females selected this response. The final attitude selection , "I drink often due to boredom." was chosen by 6%of younger and 11% of older males and 4% of the females.

When the responses toward attitudes about alcohol are examined, it appears that about one-third of the younger students and one-half of the older students have already adopted drinking behaviors. Among these alcohol consumers, about half drink but are concerned about their drinking. Further information on this response is unavailable. It remains undetermined whether students are concerned about the consequences of being caught drinking or the health effects of drinking. The other half of the drinkers are drinking to be sociable or out of boredom. It is likely, that social drinking is drinking to become intoxicated since most of the drinking involves drinking five or more drinks at one sitting.

The liberal attitudes and high rates of consumption among these young teenagers is alarming. These adolescents are at immediate risk for accidents. Future health risks given their young ages and amounts consumed include addiction and chronic health problems such as cirrohsis.

When other factors are examined relative to alcohol consumption, ethnicity seems to have a minor influence. Female rates of non-use of alcohol are almost identical for wine (80%), wine coolers (75%), and beer (74%). White and black females do not vary by more than three percent on consumptions patterns for any of these types of alcohol. There is however a difference in liquor consumption. Eighty-eight percent of the black females and 77% of the white females abstain from this form of alcohol.

A similar profile exists for male rates of alcohol consumption. Seventy-two percent of males abstain from wine, and wine coolers, and 61% abstain from beer consumption. Abstinence from liquor consumption varies by ethnicity with 69% of whites and 79% of blacks abstaining from this form of alcohol.

Further examination of drinking patterns by ethnicity indicates that black students abstain from five drink occasions by about five percent more than white students. Abstention rates for blacks are 79% (females) and 72% (males) while rates for whites are 74% (females) and 67% (males). These consistent differences in ethnic abstention patterns have been previously reported by a number of studies.

Another factor that may influence drinking patterns is family composition. When the different types of alcohol are examined, and the five drink occasions are examined, a definite pattern emerges. On average, females who reside with both parents have abstention rates about seven percent higher than those who reside with only their mother. Similarly, those who reside only with their mother, have abstention rates about eight percent higher than those who reside in another setting.

Males show a similar but much weaker pattern of abstinence. Rates of abstinence average about four percent higher for males living with both parents than for males living with only their mother. Similarly, males living alone with their mother have abstinence rates about three percent higher than those living with others.

Summary

When drinking patterns are examined, there are some differences between the sexes, ethnic groups and family structure. Males drink more than females and whites drink more than blacks. Higher rates of drinking are also found among students who do not live with both parents. It is important to note however, that these differences are not substantial enough to firmly identify at risk groups. The differences are rarely more than five percent. It appears that ethnic and parental influences may play a minor role in determining alcohol consumption patterns of these adolescents. When attitudes toward alcohol are examined, it is apparent that the greatest reason for drinking was to be sociable. This seems to indicate that peer norms or values are probably the major factor in adolescent alcohol consumption patterns. Similarly, boredom plays a smaller role in drinking behavior.

Insights from these data support the perspective that reducing alcohol consumption would be best accomplished through peer group initiatives whereby group norms discourage alcohol consumption. The boredom factor also supports prevention initiatives that encourage students to participate in activities that could be substituted for drinking. Since most intervention programs are unlikely to prevent all adolescents from using alcohol, it would be prudent to encourage an initiative that addresses responsible drinking behaviors.

SUBSTANCE USE

1988/1990
values are in percentages

Questions in this section are on items that examine substance consumption rates during the past month or during the student's lifetime. We did not report on information about the age of initiation of substance use. These data are available in the 1988 Summary Report. In the 1988 report, it was determined that drug consumption patterns were frequently established in some youth by the fourth grade.

DURING THE PAST MONTH HAVE YOU?

	MALES		FEMALES	
	YOUNGER	OLDER	YOUNGER	OLDER
Smoked "5" or more cigarettes	13/11	20/24	8/10	17/16
Chewed tobacco "5 " or more times	10/10	15/17	1/2	2/1
Used an illegal drug "3" or more times	6/6	10/13	3/3	6/6
Used an anabolic steroid "3" or more times (1990)	7	9	3	3

DURING YOUR LIFETIME HAVE YOU?

Used marijuana	18/12	30/27	10/8	20/18
Used inhalants (glue, gas, sprays)	17/17	21/23	15/14	13/17
Used cocaine	7/8	10/14	3/4	4/5

Examination of drug use indicates that males generally use substances more frequently than females. In addition, older students consume more drugs than younger students, which indicates that initiation rates are increasing during the early teen years. Although there are some suggestions that drug use may be declining in some areas (i.e marijuana), there are no clear cut trends. An overview of drug use indicates that about 15% of the males and 10% of the females are using harmful substances on a somewhat regular basis.

SUBSTANCE USE EXAMINED BY FAMILY COMPOSITION

DURING THE PAST MONTH HAVE YOU?
(Both Parents/ Mother/Others)

	MALES	FEMALES
Smoked "5" or more cigarettes	18/16/23	12/11/20
Chewed tobacco "5" or more times	10/10/12	1/1/3
Used an illegal drug "3" or more times	7/12/15	3/4/11
Used an anabolic steroid "3" or more times (1990)	4/9/7	2/3/4

DURING YOUR LIFETIME HAVE YOU?

Used marijuana	17/23/26	10/13/23
Used inhalants (glue, gas, sprays)	21/21/21	14/15/21
Used cocaine	10/14/15	4/5/10

When drug use is examined by family structure, it is apparent that the lowest rate of drug use is among students who reside with both their parents. However, since the majority of students live with both parents, these students still comprise the majority of students using drugs.

Although the rates of drug use are higher among students residing with their mother only, and again higher among those who reside with someone other than both parents or their mother, these students are the minority of students. If interventions are to reduce rates of drug utilization, programs should focus on all students.

SUBSTANCE USE EXAMINED BY ETHNICITY

DURING THE PAST MONTH HAVE YOU?

	MALES		FEMALES	
	WHITE	BLACK	WHITE	BLACK
Smoked "5" or more cigarettes	20	10	18	4
Chewed tobacco "5" or more times	13	4	1	1
Used an illegal drug "3" or more times	9	9	5	3
Used an anabolic steroid "3" or more times (1990)	3	8	2	3

DURING YOUR LIFETIME HAVE YOU?

Used marijuana	20	17	15	9
Used inhalants (glue, gas, sprays)	23	16	19	11
Used cocaine	10	14	6	4

When ethnic differences are examined, rates of utilization are generally lower among black students. This is interesting considering that a larger proportion of black students do not live with both parents. The differences between ethnic groups are magnified when data are compared by students who reside with both parents. Indications are that drug utilization is more of a white student behavior. Since students were not asked questions about their parents' financial status, the differences between white and black student drug utilization may also reflect differences in family income. There remains a possibility that black families have less income and therefore black teens cannot purchase drugs as easily as families with higher incomes. A final consideration is the school drop out rate. It remains undetermined in this study whether a disproportionate number of black versus white students drop out of school. It is well documented that drug utilization is higher among adolescents who drop out of school. Future studies need to address family income and drop out rates to clarify the influence of these factors.

NUTRITION
Attitudes About Nutrition

Agreeing With The Statement "I Don't Give Much Thought To What I Eat."

	YOUNGER	OLDER	WHITE	BLACK
MALE	46	45	48	39
FEMALE	46	45	45	45

Agreeing With The Statement "I Think About Nutrition And Eat Foods I Believe Are Good For Me."

	YOUNGER	OLDER	WHITE	BLACK
MALE	20	22	17	28
FEMALE	19	19	15	25

Almost half of the students who were surveyed said they did not give much thought to nutrition. In contrast one in five of the adolescents said they often thought about nutrition and ate foods they believed were good for them. The results indicate very little difference between older and younger students and between male and female students on the nutrition attitude items. Black adolescents are more than 1.5 times as likely to indicate that they eat foods they believe are good for them than are white adolescents.

Nearly half of all females (white and black) do not give much thought to what they eat, but among males, blacks are only 80% as likely as whites to say they do not give much thought to what they eat.

NUTRITION PRACTICES

Foods High in Fat and Cholesterol

Eat Red Meat Once A Day Or More, By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
35/43	43/46	33/37	37/42

Eat Red Meat Once A Day Or More, By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
45	43	37	42

Eat All Of The Fat On Red Meat, By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
17	20	7	13

Consume Meats Like Bologna, Hot Dogs Or Sausage 5 Or More Times Each Week, By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
7	11	4	14

Eat Fried Foods Once Or More Every Day, By Gender And Ethnicity,(1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
24	27	20	36

Eat At Fast Food Restaurants Five Or More Times Every Week, By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
6	10	6	9

Federal nutrition guidelines recommend that Americans decrease their consumption of saturated fats and cholesterol. Diets high in fats are associated with obesity, cardiovascular diseases and certain types of cancer. The data from the adolescent health surveys indicate that many of Alabama's youth are developing dietary practices which included excessive amounts of fat. Approximately 45% of males and 40% of females eat red meat at least once a day. Daily consumption of red meat increased nearly 5% since 1988 and is more common among white than black males, but is more common among black than white females. Almost 20% of males and 10% of females eat all of the fat when they eat red meat. Black students are more likely than white students to report that they eat all of the fat on red meat.

One in four of the adolescents eats fried foods at least once daily; almost one in ten eats high fat meats such as bologna, hot dogs or sausage five or more times every week, and 7% report eating at fast food restaurants five or more times every week. Although low fat meals may be available in fast food restaurants, the most popular items served in these restaurants generally result in excessive fat consumption if eaten on a regular basis.

When analyzed by ethnicity, the data indicate that black students consume more fat on average than white students. The ethnic differences are especially significant among females. Black females were almost twice as likely to eat all of the fat on red meat and to consume fried foods once or more every day. They were 3.5 times more likely to consume meats with high fat content at least five times every week.

There were no apparent differences between males and females when the nutritional data were analyzed by family background.

FRUIT AND VEGETABLE CONSUMPTION

Consume Fruit or Fruit Juice at Least Once Every Day

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
53/56	53/48	53/57	51/55

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
51	55	53	61

Never Consume Fruit or Fruit Juice

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
6/5	7/6	6/7	8/5

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
6	5	7	4

Consume Vegetables at Least Once Every Day

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
53/56	53/49	54/55	55/56

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
54	44	61	46

Never Consume Vegetables

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
12/10	10/ 9	11/10	11/11

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
8	11	8	14

Federal nutrition guidelines suggest that the typical diet in the United States contains too high a proportion of total calories from fats and too low a proportion of total calories from complex carbohydrates. Fruits, vegetables and grains are principle sources of complex carbohydrates and fruit and vegetables are the major source of vitamins A and C. At least four daily servings of fruit and vegetables are recommended.

Survey data indicate that more than half of Alabama's teens consume fruit or fruit juice every day and a like number consume vegetables every day. A slightly higher percentage of females indicated daily fruit and vegetable consumption than did males. Differences between younger and older females on these items were minimal, but older males were less likely than younger males to consume fruit and vegetables daily. Ethnically, black teens were more likely to consume fruit or fruit juice, but white teens were more likely to consume vegetables.

It is likely that many of the teens who do consume fruit or vegetables daily do not consume the recommended servings. Of major concern, however, are the nearly half of teens who do not eat fruit or vegetables daily. Over 5% of the teens report never consuming fruit or fruit juice and 10% report never consuming vegetables. When data concerning non-consumption of fruit were examined by age, gender, ethnicity and home environment the differences were minimal. Black teens were more likely than white teens to report that they never ate vegetables. This was especially true for females. Black females (14%) were nearly twice as likely to never consume vegetables than were white females (8%). Teens who lived with both parents were more likely to eat vegetables daily and were less likely to report never eating vegetables. This difference may reflect more time being available to prepare vegetables in homes with both parents than in homes with the mother only or in other situations.

CONSUMPTION OF SWEETS

Consumption of Candy, Sugar Drinks More Than Once a Day

By Gender And Age, (1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
36	34	43	46

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
34	36	38	53

Consumption of Cakes, Pies, and Sweet Rolls
More Than Once a Day

By Gender And Age, (1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
15	16	20	18

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
13	19	11	32

The data indicate that many teens in Alabama may be obtaining a substantial amount of their daily calorie consumption from foods high in sugar content. Often these foods are not nutritionally dense and when consumed in large amounts they may result in both nutritional deficiencies and/or excessive calorie consumption. In addition high sugar foods contribute to tooth decay and complicate certain metabolic disorders such as diabetes and hypoglycemia.

Nearly 40% of the teens said they consumed candy or sugar drinks more than once every day and 17% said they consumed cakes, pies and sweet rolls more than once a day. Females are more likely to eat high sugar foods than males, and age differences were not apparent. The 1988 survey only had two items on high sugar foods, therefore results from 1988 and 1990 can not be directly compared. Percentages from 1988 suggest that little change has taken place in the last 2 years.

When the data are examined by ethnicity differences are evident. Black teens of both sexes are more likely to be frequent consumers of high sugar foods, but the ethnic differences are most apparent among females. Over half of the black females (53%) report consuming candy or sugar drinks more than once every day. This compares to 38% for white females. Black females (32%) are almost three times as likely as white females (11%) to eat cakes, pies, and sweet rolls more than once a day. The high rates of consumption of sugary foods among black females accounts for most of the difference in sugar consumption between males and females. Among white teens there is very little difference between males and females.

DIETING TO CONTROL WEIGHT

Gone on a Diet to Control Weight at Least Once in the Past Year

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
23/28	25/24	53/53	61/58

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
24	29	60	47

Dieting to control weight is very common among Alabama's adolescents. Data suggest that there has been very little change in dieting behavior in the past two years. Over half of the female adolescents had dieted to control weight within the past year. Dieting behavior is twice as likely to occur among females than among males and white females are more likely to diet than black females. In contrast, a larger percentage of black males diet than white males. It was not determined whether the purpose of the dieting was to gain or lose weight. It is possible that the purpose was often to gain weight, particularly among males.

FORCED VOMITING

Vomit on Purpose After Eating, Once a Month or More

By Gender And Age, (1988/1990).

MALES		FEMALES	
YOUNGER	OLDER	YOUNGER	OLDER
17/18	16/14	15/17	18/13

By Gender And Ethnicity, (1990).

MALES		FEMALES	
WHITE	BLACK	WHITE	BLACK
10	28	13	18

By Gender And Home Environment

MALES			FEMALES		
BOTH PARENTS	MOTHER ONLY	OTHER	BOTH PARENTS	MOTHER ONLY	OTHER
15	21	19	12	17	22

Many articles have been written about forced vomiting in relation to the binge-purge cycle characteristic of bulimia. Most of the literature indicates that the practice is most common among adolescent females. The Alabama data support the notion that forced vomiting is a common practice among adolescents. Approximately 15% of the adolescents say they vomit on purpose at least once a month. Surprisingly, males report doing this as often as females.

Black adolescents are two times more likely to vomit on purpose than white adolescents. More than one fourth of the black males reported frequent forced vomiting, a rate that is almost three times that of white males.

The home environment also seems to affect the incidence of forced vomiting. The lowest incidence of forced vomiting was found among teens living with both parents. For males the highest incidence was reported among those living with the mother only. Females living in other environments reported rates almost twice those of females living with both parents.

The high incidence of forced vomiting is of concern not only because of the physical harm which can result with frequent forced vomiting, but also because of the emotional factors which may be precipitating the practice.

NUTRITION KNOWLEDGE

The participants in the Alabama Adolescent Health Survey were asked several items to determine their knowledge of nutrition. The analyses of the results on these questions indicate that many of Alabama's adolescents have gaps in nutritional information needed to make wise food choices. Three in 10 of those surveyed did not know foods high in saturated fats caused heart disease; 2 in 3 did not know that the lack of fiber in diet could cause constipation, and over 8 in 10 did not know that tropical oils contained saturated fats.

Only small differences in knowledge between males and females were noted. Older students were more knowledgeable than the younger students, and white adolescents were more knowledgeable than the black adolescents. For example, among younger students 31% knew that lack of fiber could cause constipation while for older teens the corresponding percentage was 37. Among white teens 40% knew the lack of fiber could cause constipation, but only 20% of the black teens responded to this item correctly. Even though differences were identified between the various groups in the analysis, high levels of ignorance and misinformation are present among all groups.

SUMMARY

More than half of Alabama's Adolescents indicate that they give some thought to what they eat. When the results of knowledge items are examined, it is evident that for many of the teens, the concern for what is eaten is not accompanied with knowledge needed to make wise decisions. It also is likely that even when adequate knowledge is present it is not resulting in healthy nutritional behavior.

The nutritional practices reported indicate that as many as 50% of the adolescents are consuming excessive amounts of fat, more than 50% are not consuming adequate amounts of fruit and vegetables, and one third or more may be consuming excessive amounts of highly sugared foods.

The nutritional practices of many of the adolescents place them at increased risk of developing various health problems later in life. Black females are an especially high risk group because of their high consumption of fats and sugars.

Good nutrition is basic to the health and wellbeing of every person. Although data on nutrition knowledge was limited in the survey the available data indicates low knowledge levels. Increasing efforts should be made to develop nutrition education programs within every level of each child's education. This education should focus on eating behaviors, informed food decision making, and proper meal preparation.

DISCUSSION

It is important to recognize the limitations of the study under review. The data are self-report, subsequently one needs to use caution in the interpretation of findings. In addition, the sample surveyed was not entirely random since some superintendents refused to cooperate and were replaced by others who were more favorable to an evaluation of their students. There is always a slim possibility that these school districts may differ somehow from their counterparts.

A review of the behaviors of our Alabama adolescents indicates that their behaviors are very similar to those of adolescents throughout the nation. Although the rates of risky health behaviors among Alabama's teens seem to be about average, these behaviors are serious and warrant a high priority for action toward their amelioration.

Although the focus of this study has been the examination of adolescent behaviors, some of the results provide insights of adolescent knowledge regarding health behaviors and related issues. It is apparent that the health knowledge of these adolescents is generally poor. Poor knowledge however, does not always predict poor health behavior. Researchers in health behavior generally agree that high knowledge regarding health behaviors does not always predict immediate positive health behavior changes. However, more knowledge and education about health topics such as mental health, safety, nutrition, violence, contraception etc. improves the likelihood that positive health behavior changes will occur. Recent changes in the HIV infection rates of homosexuals and the lower rates of tobacco use among the general public demonstrate that educational campaigns can impact on behavior in a positive manner. In order to have a greater and more positive impact on health behaviors, we need to go beyond just improving health eduction to the development of broader interventions.

Interventions such as information campaigns consisting of a few school lectures or the handing out of pamphlets have been proven to have minimal impact on adolescent behaviors. The lack of change of adolescent behaviors among Alabama youth confirm that current initiatives are not as effective as all of us would like them to be. A number of moral, political and financial restraints have influenced how communities view interventions designed for adolescents.

It is apparent in discussions with school administrators that most administrators recognize the need for interventions to address negative student health behaviors, even when these behaviors do not occur during school hours and on school grounds. These negative health behaviors do impact on academic performance and achievement. The health status and health needs of children and adolescents are very emotional topics. Addressing educational issues such as adolescent violence, sexual behavior, drug use, sexual abuse, contraception, and suicide is extremely controversial. It is the controversial

nature of prevention initiatives and the resource requirements for such initiatives that have inhibited administrators from pursuing comprehensive interventions to address student health needs and behaviors. The lack of support to school administrators for meeting student health and behavioral needs highlights a major barrier for prevention initiatives.

A review of the literature on prevention initiatives indicates that successful interventions have a variety of shapes and forms. There is no set type of intervention that is successful in all settings. Prevention initiatives need to be adapted and molded to the settings that they are intending to serve. A common component of successful interventions is that they are all run by dedicated people. Good, well-trained personnel is a common component of all interventions that are successful.

Adolescent health behaviors do not occur in a singular fashion. Studies repeatedly show that risky behaviors usually occur in combinations. Examples of multiple risky behaviors include such things as drug or alcohol use and violence, and drug or alcohol use and sexual initiation. This is the case in our adolescents. In our sample of adolescents, about half of the sexually active students also drink alcohol in large quantities. Comprehensive initiatives make good sense. Because of the complex nature of undesirable behaviors, it is foolish to presume that a single topic approach will have much success.

Issues such as teenage pregnancy, sexually transmitted diseases and premature sexual activity can not be effectively addressed using a singular approach. Schools and communities should endorse educational campaigns which promote the delaying of sexual intercourse and provide support for abstinence as the normative behavior for adolescents, but they must also acknowledge the fact that almost half of the teens have had sexual intercourse and as many as 10% are experiencing intercourse several times each week. A singular emphasis upon abstinence is likely to ignore the needs of many adolescents and will not incorporate related issues such as: mental health, pregnancy, contraception, the prevention of sexually transmitted diseases, and the relationship of sexual activity and substance use. If communities wish to ameliorate these types of destructive teenage behaviors, then these communities will need to commit to comprehensive and ongoing interventions.

Most comprehensive efforts designed around prevention will require a multitude of services from a variety of agencies. These include departments and agencies from mental health, public health, law enforcement, community health and educational fields. Currently there is no mechanism for determining ownership and departmental involvement in ongoing initiatives. Programs are generally driven by well intended cooperative personnel who are concerned about invading "turf". Subsequently, it is difficult to establish and maintain prevention initiatives.

The data from this report predict that future generations of Alabamians will experience continued rates of high teenage pregnancy, high rates of sexually transmitted diseases, high rates of alcoholism and higher than normal rates of chronic diseases. It is imperative to emphasize prevention initiatives during the current decade. The continued drain on our

resources to treat preventable illness and deal with social problems such as premature birth and disability mandate that strong consideration and commitment be made toward ameliorating health problems of children and adolescents.

Since it has taken several decades to advance to the current state of affairs, it is unlikely that bandaid approaches will have any lasting impact on our current child and adolescent health and behaviors. Amelioration of current problems requires vision, and a long-term commitment to excellence in Alabama. The following recommendations are presented as a framework for discussion. Although our communities and schools are empowered with the responsibility of dealing with local issues and problems, it is our belief that state leadership sets the pattern, assists with resources and develops the model which local governments build upon.

Individuals seeking to broaden their background on adolescence health issues should attempt to read CODE BLUE: Uniting for Healthier Youth. This is a report issued by the National Commission on the Role of the School and the Community in Improving Adolescent Health. Information about this document can be obtained from the Division of Adolescent and School Health in the Centers for Disease Control, Atlanta, GA 30333. This document is an excellent framework upon which to build discussions and recommendations tailored to your community.

RECOMMENDATION

THERE SHOULD BE A FIVE AND TEN YEAR STATE-WIDE PLAN FOR ADOLESCENT/CHILD HEALTH ENHANCEMENT.

Current plans for most departments and institutions to participate in the Alabama year 2000 health objectives are a very positive approach for health initiatives. However, this cooperative approach does not focus solely on youngsters and adolescents. These two groups have unique problems that are easily overlooked. The legislature should consider the appointment of a permanent "task force" created by the legislature to review prevention initiatives to ensure that they are comprehensive in scope. The task force should have a multidisciplinary focus with a core of experts in school and community health. The task force should have a behavioral as well as a medical orientation.

RECOMMENDATION

THE ADOLESCENT/CHILD HEALTH TASK FORCE SHOULD MAKE A YEARLY REPORT TO THE LEGISLATURE.

This group should make a yearly report to the legislature and have the authority to "encourage" joint initiatives involving multiple departments and agencies. Furthermore, support personnel of the task force should include one or two coordinators in each public

health area. The function of these coordinators should be to: a) oversee that quality school health instruction is encouraged; b) ensure that schools adequately access public health services and; c) to initiate community-school health interventions for youth.

The ideal person for such a coordinator position would be a nurse who has also obtained a certified degree in health education.

RECOMMENDATION

THERE NEEDS TO BE A STANDING COMMITTEE/TASK FORCE TO ENSURE COMMUNICATION BETWEEN STATE DEPARTMENTS OF EDUCATION, PUBLIC HEALTH, MENTAL HEALTH AND INSTITUTIONS OF HIGHER EDUCATION.

A focus of these communications should be to:

- allow for joint efforts in health promotion.
- forecast training needs of personnel in the upcoming 5 to 10 years to allow institutions of higher education to develop curriculum for these programs.
- develop comprehensive programs/planning to enhance the health of adolescents and children.

State departments and institutions of higher education should develop philosophical statements to acknowledge their priorities and commitments to adolescent and child health enhancement.

RECOMMENDATION

THIS SURVEY OR A MODIFICATION THEREOF SHOULD BE REPEATED AT LEAST EVERY FOUR YEARS TO SERVE AS A MECHANISM TO MONITORS THE HEALTH KNOWLEDGE AND BEHAVIORS OF ALABAMA'S ADOLESCENTS.

Program administrators and related personnel need accurate and current information regarding adolescent behaviors. This information can be used to help direct ongoing programs and intiatives. These databases need to be conducted by researchers who are independent of state agencies. Furthermore, the report should go to the legislature and become public domain.